Working Group 3 Report

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Pharmacosurveillance gaps and opportunities: phenotype definitions, EMRs, resource needs

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Key gaps in pharmacosurveillance

Main challenge: difficulties in case ascertainment

- Standardized case definition
- Minimum set of variables (differentiate cases from non-cases)
- Generalizable to use on common data models (and/or with other EMRs)
- Needs ability to dig deeper; e.g. medical chart validation of phenotype, drug culprits, timing of exposure, risk factors

Next Steps

- Evaluate different case definitions used by others; e.g. EuroSCAR, RegiSCAR, ITCH, and other SJS projects
- Iterative process among researchers and clinicians to arrive at a common definition

Synthesis

- Active surveillance with real-time data collection is fundamentally different from retrospectively collected data with case validation
- Set of items to satisfy both collection efforts

Capabilities of developing active monitoring in U.S.

- May need multiple strategies that include use of both prospective and retrospective data collection

- Prospective collection for complete case ascertainment and pharmacogenomics studies
  - Burn units seems a promising approach, focusing on a few large areas/cities may be helpful.

- Use of existing large databases for active surveillance?
  - Capabilities being developed in some databases for pharmacogenomics studies
  - Needs ability to identify cases reliably, needs ability to conduct case validation (blinded to exposure status), needs standardized processes for collecting genetic data across disparate sites
    - eMERGE has had success in shepherding this process successfully

Estimating rates of SJS/TEN

- How much of a priority is it to understand rates
  - Trends over time may not be helpful
  - Relevant for cost-effective studies, to estimate burden of disease, product-specific rates
- Needs nearly complete capture of cases and ability to identify cases
  - If capability is developed, consider assessing product-specific rates, race-specific
  - limit to incidence medication use

Epidemiology of disease progression

- Current poor understanding of factors associated with disease progression
- Long-term outcomes of SJS/TEN not well understood.

Next steps

- Consider use of ScoreTEN
  - 7 point score used for prognosis, calculated on day 3 of disease
  - Limitations is that data not always collected on day 3; e.g. lab values, and some characteristics such as lung involvement are not considered
- Consider future studies to address the range and extent of outcomes and disabilities

Other Items

- Large scale collaborations in US might be stimulated by concerted efforts to deposit data into public databases such as ClinVar (or others such as dbGAP)

- Challenges with current screening recommendations; i.e. low PPV of haplotypes